

AMENDMENTS TO THE DRAWINGS

The attached sheets of drawings include changes to Figs. 2 and 27.

Attachment: Replacement sheets

REMARKS

Reconsideration and allowance of the subject application are respectfully requested. Applicant thanks the Examiner for total consideration given the present application. Claims 1-15 are pending prior to the Office Action. Claims 16-48 have been added and no claims have been canceled through this reply. Therefore, claims 1-48 are pending. Claims 1-2 and 16 are independent. Applicant respectfully requests reconsideration of the rejected claims in light of the remarks presented herein, and earnestly seeks a timely allowance of all pending claims.

OFFICIAL ACTION

Preliminary Comments

Request for Personal Interview

By this reply, Applicant respectfully requests a personal Interview. The Examiner is respectfully requested to contact Applicant's representative prior to formal consideration of the arguments and amendments set forth herein to schedule and conduct an Interview.

Request for Accepted Drawings

In the Office Action, the Examiner objects to the drawings because 1) Figures 22-27 allegedly should be designated by a legend such as "Prior Art" and 2) elements 11a, 11b, 11i, 11j, and 205 are not illustrated in Figures 2 and 27.

Figure 27 has been labeled as "Conventional Art" as required by the Examiner. Figures 2 and 27 have been amended to include elements 1a, 11b, 11i, 11j, and 205. Figures 22-26 are not conventional art. Figures 22-26 describe an embodiment of the present invention; see specification (page 16, lines 11-12). Therefore the objection to the Figures should be withdrawn and the Applicant respectfully asks the Examiner to indicate the acceptance of the drawings in the next Office Action.

Objection to Abstract

The Abstract has been objected to for being longer than 150 words. The Abstract has been amended to be less than 150 words. Therefore the objection to the abstract should be withdrawn.

Amendment to the Specification

Applicants have amended the specification in order to correct minor typographical errors. Therefore the objection to the specification should be withdrawn.

Claim Rejection - 35 U.S.C. § 102(b)

Claims 1-6 and 11-13 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated over Boardman et al. (U.S. Patent No. 5,492,223). Applicant respectfully traverses this rejection.

For a Section 102 rejection to be proper, the cited reference must teach or suggest each and every claimed element. *See M.P.E.P. 2131; M.P.E.P. 706.02*. Thus, if the cited reference fails to teach or suggest one or more elements, then the rejection is improper and must be withdrawn.

In this instance, Boardman fails to teach or suggest each and every claimed element.

The Technical field of Boardman differs from the claimed invention:

Boardman (col. 4, lines 8-12) discloses a technique which enables production of semiconductor devices in a separate semiconductor device producing apparatus, as each semiconductor device is placed on a tray. In order to enable that, this technique aims to align the structure of Fig. 2 to the transversal (horizontal) direction in a matrix manner like Fig. 1, for example. Namely, Fig. 2 shows a structure that two trays 10' (the upper tray and the lower tray) sandwich a semiconductor device. This technique is fundamentally different from the claimed invention, In the present application and claimed invention, trays (corresponding to the structure of Fig. 2 of

Boardman) are stacked in two, three, etc. in the longitudinal (vertical) direction in order to carry many carried objects (substrates) at once in a small work floor in area.

Furthermore, in Boardman, it is important to be able to turn over the semiconductor device in a condition sandwiched by the two trays for such work as attaching leads as shown in column 11, line 66 to column 12, line 7. On the contrary, in the present application and the claimed invention, it is important to make the carried objects stable; for example, to make the substrate(s) not swing.

In the present application, precision is necessary because the objects are chucked mechanically. Furthermore, in the present application, many objects, for example, sixty objects are stacked, and heavy objects, for example, of not less than one ton are stacked.

Thus, Boardman and the claimed invention are absolutely different in technical fields.

Argument: Feature of claim 1 not taught by Boardman:

Independent claim 1 has been amended to include additional limitations, claim 1 as amended recites, *inter alia*, “[a] stackable substrate carrying tray on which a substrate is placed horizontally, so as to be separated from an upper stacked substrate carrying tray, [wherein] the upper contact section contacting, by areal contact, a first substrate carrying tray which is stacked above said substrate carrying tray with the substrate placed thereon and the lower contact section contacting, by areal contact, a second substrate carrying tray which is stacked below said substrate carrying tray with the substrate placed thereon.” *Emphasis added.*

Boardman discloses, in Figures 6 and 7, each of the semiconductor devices 38 and 62 (upper part 44 and lower part 42) is sandwiched by two trays, where both (upper and lower) trays contact the substrate. While, lead-in chamfer 18' and external chamfer 20' do not contact each other. The reason is that: if lead-in chamfer 18' and external chamfer 20' contacted each other, the substrate and the upper tray would not contact each other necessarily and would possibly be separate; thus, the substrate could not be sustained by the two trays. This also hold true between the substrate and the lower tray.

Boardman, in Figure 2, illustrates the state that the semiconductor device has not yet been inserted between the trays, and the upper tray and the lower tray can still contact each other with their slanting portions. However, once a semiconductor is inserted, the upper tray and the lower tray do not contact each other any longer.

Further, Boardman discloses lead-in chamfer 18' and external chamfer 20' are slanting. Namely, the interlocking nest feature 16 exists. Boardman, in column 4, lines 50-53, discloses the trays can be aligned suitably even if there is impact or vibration when the upper tray are overlapped on the lower tray. Namely, 18' and 20' are slanting mainly because they function as a stopper which prevents the upper tray from falling down even if it slips transversely. Therefore, 18' and 20' do not need to contact each other areally, where they only have to contact each other on a line. Consequently, the angle therebetween is limited only to what Boardman discloses in column 8, lines 23-26: the angle of the external chamfer 20' should be approximately equal to or slightly less than the angle of the lead-in chamfer 18', approximately in a range of 2° to 5°. Namely, Boardman discloses that the angle of the external chamfer 20' do not have to be strictly equal to the angle of the lead-in chamfer 18'.

On the contrary, in the claimed invention, it is aimed that the upper and lower contact sections are attached hard to each other and are made a support pillar of the tray-stacked body, and where the upper and lower contact sections are made to contact each other areally when the trays are stacked with the substrates placed. Thus, Boardman and the claimed invention are different in their structures.

Independent claim 2 is allowable for similar reasons as set forth above in reference to independent claim 1.

Dependent claims 3-6 and 11-13 are allowable for the reasons set forth above with regards to claim 2 at least based on their dependency on claim 2.

Accordingly, the Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 1-6 and 11-13 under 35 U.S.C. § 102(b).

Reconsideration and allowance of claims 1-6 and 11-13 are respectfully requested for at least these reasons.

Claim Rejection - 35 U.S.C. § 103(a)

Claims 8 and 15 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Boardman et al. (U.S. Patent 5,492,223). Claims 7 and 14 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Boardman et al. (U.S. Patent 5,492,223) in view of Britt (U.S. Patent No. 3,589,511). Claims 9 and 10 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Boardman et al. (U.S. Patent 5,492,223) in view of Cristy et al. (U.S. Patent No. 3,695,424). Applicant respectfully traverses these rejection.

For a Section 103 rejection to be proper, a *prima facie* case of obviousness must be established. *See M.P.E.P. 2142*. One requirement to establish a *prima facie* case of obviousness is that the prior art references, when combined, must teach or suggest all claim limitations. *See M.P.E.P. 2142; M.P.E.P. 706.02(j)*. Thus, if the cited references fail to teach or suggest one or more elements, then the rejection is improper and must be withdrawn.

Dependent claims 7-10 and 14-15 are allowable for the reasons set forth above with regards to claim 2 at least based on their dependency on claim 2.

Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 7-10 and 14-15 under 35 U.S.C. § 103(a).

Reconsideration and allowance of claims 7-10 and 14-15 are respectfully requested for at least these reasons.

Argument: Feature of claims 7 and 14 not taught by Britt:

In claims 7 and 14, the Examiner cited Britt for the alleged teaching of “wherein at least one of the upper and lower inclined sections are inclined in such a curved manner that a gradient is downwardly moderate.”

However, in the trays disclosed by Britt, the elements 38 (Figure 8) do not contact each other. Therefore, these are not equal to the upper and lower contact sections of the present application. Thus, Britt does not disclose wherein at least one of the upper and lower inclined sections are inclined in such a curved manner that a gradient is downwardly moderate.

Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 7 and 14 under 35 U.S.C. § 103(a).

Reconsideration and allowance of claims 7 and 14 are respectfully requested for at least these reasons.

Conclusion

Therefore, for at least these reasons, all claims are believed to be distinguishable over Boardman. It has been shown above that the cited reference(s) may not be relied upon to show at least these features. Therefore, claims 1-15 are distinguishable over the cited references.

In view of the above remarks and amendments, Applicant believes the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the Aslan Ettehadieh, Reg. no. 62,278, at the telephone number below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.147; particularly, extension of time fees.

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Respectfully submitted,

By 

Michael R. Cammarata

Registration No.: 39,491

BIRCH, STEWART, KOLASCH & BIRCH, LLP

8110 Gatehouse Road

Suite 100 East

P.O. Box 747

Falls Church, Virginia 22040-0747

(703) 205-8000

Attorney for Applicant